

In the Claims

Please amend Claims 1, 4, 5, 7, 10, 11, 13, and 16 as shown below. Please add claims 23-31. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made." The following is a clean version of the entire set of pending claims.

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1. (Amended) A duct joining system, comprising:
a first duct having a male end;
a flexible seal and locking mechanism retained on said male end of said first duct; and
a second duct having a female end having a first cross sectional area and a first bead of
a second cross sectional area that is greater than said first cross sectional area, said second
duct may be joined to the first duct by sliding said female end over said male end, said
flexible seal and locking mechanism being compressed within said first cross sectional area,
said flexible seal and locking mechanism expanding into said first bead to form both a seal
and a mechanical lock that provides resistance to the separation of said first duct and said
second duct greater than a resistance to the joining of said first duct and said second duct.
 2. The duct joining system of Claim 1, wherein said flexible seal and locking
mechanism is a flexible gasket held on said male end at an angle relative to normal and away
from said end of said first duct.
 3. The duct joining system of Claim 1, wherein said resistance to the separation
of said first duct and said second duct is at least three times greater than said resistance to the
joining of said first duct and said second duct.
 4. (Amended) The duct joining system of Claim 1, further comprising a second
bead positioned after said flexible seal and locking mechanism that acts as a stop bead to
ensure said second duct is properly positioned with said first duct when said first duct and
said second duct are joined.

5. (Amended) The duct joining system of Claim 4, further comprising a third bead on said first duct located between said flexible seal and locking mechanism and said end of said first duct, wherein said third bead has a diameter that is less than the diameter of said second bead.

6. The duct joining system of claim 1, wherein one of said first duct and said second duct is a fitting.

7. (Amended) A duct joining system comprising:
a first duct having a female end;
a flexible seal and locking mechanism retained within said female end of said first duct; and
a second duct having a male end having a first cross sectional area and a first bead of a second cross sectional area that is less than said first cross sectional area, said second duct may be joined to the first duct by sliding said female end over said male end, said flexible seal and locking mechanism being compressed by said first cross sectional area, said flexible seal and locking mechanism expanding into said first bead to form both a seal and a mechanical lock that provides resistance to the separation of said first duct and said second duct greater than a resistance to the joining of said first duct and said second duct.

8. The duct joining system of Claim 7, wherein said flexible seal and locking mechanism is a flexible gasket held on said female end at an angle relative to normal and away from said end of said first duct.

9. The duct joining system of Claim 7, wherein said resistance to the separation of said first duct and said second duct is at least three times greater than said resistance to the joining of said first duct and said second duct.

10. (Amended) The duct joining system of Claim 7, further comprising a second bead positioned after said flexible seal and locking mechanism that acts as a stop bead to

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ensure said second duct is properly positioned with said first duct when said first duct and said second duct are joined.

11. (Amended) The duct joining system of Claim 10, further comprising a third bead on said first duct located between said flexible seal and locking mechanism and said end of said first duct, wherein said third bead has a diameter that is greater than the diameter of said second bead.

12. The duct joining system of Claim 7, wherein one of said first duct and said second duct is a fitting.

13. (Amended) A duct joining system comprising:
a first duct having a male end;
a flexible seal and locking mechanism retained on said male end of said first duct; and
a flexible duct that may be joined to said first duct by sliding said flexible duct over said flexible seal and locking mechanism, said flexible seal and locking mechanism expanding within said flexible duct to form both a seal and a mechanical lock that provides resistance to the separation of said first duct and said flexible duct greater than a resistance to the joining of said first duct and said flexible duct.

14. The duct joining system of Claim 13, wherein said flexible seal and locking mechanism is a flexible gasket held on said male end at an angle relative to normal and away from said end of said first duct.

15. The duct joining system of Claim 13, wherein said resistance to the separation of said first duct and said second duct is at least three times greater than said resistance to the joining of said first duct and said second duct.

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(claim 3)

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16. (Amended) The duct joining system of Claim 13, further comprising a bead on said first duct located between said flexible seal and locking mechanism and said end of said first duct.

17. The duct joining system of Claim 13, wherein said first duct is a fitting.

18. An apparatus comprising:

a first duct;

a second duct, wherein a portion of said first duct is inserted into a portion of said second duct; and

means for providing a seal and a mechanical connection between said first duct and said second duct when said portion of said first duct is inserted into a portion of said second duct.

19. The apparatus of Claim 18, wherein said second duct has a raised bead into which said means is seated to form said seal and said mechanical connection when said portion of said first duct is inserted into said portion of said second duct.

20. The apparatus of Claim 18, wherein said first duct has a depressed bead into which said means is seated to form said seal and said mechanical connection when said portion of said first duct is inserted into said portion of said second duct.

21. The apparatus of Claim 18, wherein said means is a flexible gasket.

22. The apparatus of Claim 21, said first duct having a first bead, said flexible gasket being mounted closer to the front of said first duct than said first bead, said flexible gasket having an angle relative to normal of said first duct.

Sub 61 23. (New) The duct joining system of Claim 1, wherein said first bead comprises a circumferential groove in said second duct that has said second cross sectional, and said

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flexible seal and locking mechanism expands into said circumferential groove to form both a seal and a mechanical lock that provides resistance to the separation of said first duct and said second duct greater than the resistance to the joining of said first duct and said second duct.

24. (New) The duct joining system of Claim 1, wherein said flexible seal and locking mechanism comprises a member that expands into said second bead, said member being a substantially triangular shape.

25. (New) The duct joining system of Claim 7, wherein in said first bead comprises a circumferential groove in said second duct, and said flexible seal and locking mechanism expands into said circumferential groove to form both a seal and a mechanical lock that provides resistance to the separation of said first duct and said second duct greater than the resistance to the joining of said first duct and said second duct.

26. (New) The duct joining system of Claim 7, wherein said flexible seal and locking mechanism comprises a member that expands into said second bead, said member being a substantially triangular shape.

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27. (New) A duct joining system comprising:
a first duct including a member disposed on an exterior surface of said first duct about a cross-section thereof; and

a second duct including a groove extending outward from an interior surface of said second duct about a cross-section thereof, so that when said first duct is inserted into said second duct and said member is in said groove a seal and a resistance to a separation of said first duct and said second duct greater than a resistance to the insertion of said first duct into said second duct is provided by said member and said groove.

28. (New) The duct joining system of Claim 27, wherein the member comprises a flexible gasket that is at an angle relative to a normal of the first duct.

29. (New) The duct joining system of Claim 27, further comprising a stop bead on said exterior surface of said first duct.

30. (New) The duct joining system of Claim 27, wherein said member is coupled to said first duct by a hinge.

31. (New) The duct joining system of Claim 27, wherein one of said first duct and said second duct is a fitting.

32. (New) A duct joining system comprising:
a first duct including a member on an exterior surface thereof, said member having a height from said exterior surface; and
a second duct including a groove extending outward from an internal surface thereof, said groove having a depth from an interior surface thereof, wherein the depth of the groove and the height of the member are selected so that when said first duct is inserted into said second duct and said member is in said groove, a seal and a resistance to a separation of said first duct and said second duct greater than a resistance to the insertion of said first duct and said second duct is provided by said member and said groove.

33. (New) The duct joining system of Claim 32, wherein said the groove comprises a circumferential groove, and said member flexes into said circumferential groove to form both a seal and a mechanical lock that provides the resistance to the separation of said first duct and said second duct greater than the resistance to the insertion of said first duct into said second duct.

34. (New) The duct joining system of Claim 32, wherein the member comprises a flexible gasket that is at an angle relative to a normal of the first duct.

35. (New) The duct joining system of Claim 32, wherein the member flexes into the groove.

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36. (New) The duct joining system of Claim 32, wherein said member is coupled to said first duct by a hinge.

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37. (New) The duct joining system of Claim 32, one of said first duct and said second duct is a fitting.

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